

Amendments to the Specification:

Please replace paragraph [0063] with the following amended paragraph:

Next, a method of manufacturing the electromechanical filter 100a shown in the embodiment 1 will be explained hereunder.

FIGS.7(a) to ~~(i)~~ (e) and FIGS. 8 (a) to (d) are sectional views showing steps of manufacturing the electromechanical filter in the embodiment 1 of the present invention in stages.

Please replace paragraph [0069] with the following amended paragraph:

Then, the drive electrode 103 will be formed hereunder.

As shown in ~~FIG.7(f)~~ FIG. 8 (a), a metal thin film 103a made of Al, or the like is deposited on an overall surface of the substrate, on which the magnetic materials 102 and the insulating film 106 are formed, by the sputter. Then, a photoresist 303 that is patterned into a drive electrode pattern by the photolithography is formed thereon.

Please replace paragraph [0070] with the following amended paragraph:

Then, the metal thin film 103a is dry-etched, and the photoresist 303 is removed by the ashing. Thus, as shown in ~~FIG.7(g)~~ FIG. 8 (b), the magnetic material 102 is formed on the spacers 105 respectively.

Please replace paragraph [0071] with the following amended paragraph:

Finally, the movable electrode 101 will be formed hereunder.

As shown in ~~FIG.7(h)~~ FIG. 8 (c), a photoresist 304 that is patterned into sacrifice layer patterns is formed on the magnetic materials 102, the drive electrode 103, and the insulating film

106. Then, a metal thin film 101a such as Al, or the like is deposited by the sputter, and then a photoresist 305 that is patterned into a movable electrode pattern by the photolithography is formed thereon.

Please replace paragraph [0072] with the following amended paragraph:

Then, the metal thin film 101a is dry-etched, and the photoresist 304 is removed by the ashing. Thus, as shown in ~~FIG. 7(i)~~ FIG. 8 (d), the movable electrode 101 having a hollow structure is formed.

Here, in case it is assured that there is no possibility that a large loss occurs even when the high-frequency signal that propagates through the movable electrode 101 acting as the signal line also propagates over the substrate 107, the insulating film 106 may be omitted.

Please replace paragraph [0081] with the following amended paragraph:

Next, the tunable filtering mechanism in the electromechanical filter 400 will be explained hereunder.

FIG.9(b) is a sectional view showing the configuration of the electromechanical filter in the embodiment 2 of the present invention. ~~In this example, the carbon nanotube is employed.~~ The signal being input from the signal input port IN propagates through the movable electrode 101, and is output to the signal output port OUT. In this case, since the movable electrode is positioned in the DC bias magnetic field H that the magnetic material 102 generates, the signal filtering due to the ferromagnetic resonance phenomenon occurs. Thus, only the signal of the particular frequency that is decided by the ferromagnetic resonance frequency can propagate to the signal output port OUT.

Please replace paragraph [0107] with the following amended paragraph:

Meanwhile, the drive electrodes 103 are provided on both sides of the movable electrode 101 to put the ~~drive electrodes 110~~ movable electrode 101 between them. Thus, the movable electrode 101 can be moved in two horizontal directions by the electrostatic force that is generated by a potential difference between the movable electrode 101 and the drive electrodes 103. Since the drive electrodes 103 must provide the desired driving force to the movable electrode 101, they are provided on the substrate 107 via the spacer 108 respectively in such a manner that they are provided in positions that are optimized relatively to the movable electrode 101.

Please replace paragraph [0120] with the following amended paragraph:

Next, the tunable filtering mechanism in the electromechanical filter 700 will be explained hereunder.

~~The configuration of the electromechanical filter using the carbon nanotube is shown.~~
The signal being input from the signal input port IN propagates through the fixed electrode 111 to generate the high-frequency magnetic field around the fixed electrode 111 by the high-frequency current. The precession of the spin is excited in the magnetic material 102 by the high-frequency magnetic field (kittel mode). The ferromagnetic resonance phenomenon occurs only when the signal of the ferromagnetic resonance frequency of the magnetic material 102 is input, so that the angle of the precession in the magnetic material 102 is maximized and also a magnitude of the induced electromotive force is maximized. As a result, the signal filtering is caused, and thus only the signal of the particular frequency decided by the ferromagnetic resonance frequency can propagate to the signal output port OUT.

Please replace paragraph [0127] with the following amended paragraph:

Next, the tunable filtering mechanism in the electromechanical filter 800 will be explained hereunder.

~~The configuration of the electromechanical filter using the carbon nanotube is shown.~~
The signal being input from the signal input port IN propagates through the fixed electrode 111 to generate the high-frequency magnetic field around the fixed electrode 111 by the high-frequency current. The precession of the spin is excited in the magnetic material 102 by the high-frequency magnetic field (kittel mode). Then, the spin wave travels from the fixed electrode 111 side to the fixed electrode 112 side, and the induced electromotive force is generated in the fixed electrode 112 by the magnetic field generated by this mode on the fixed electrode 112 side. The ferromagnetic resonance phenomenon occurs only when the signal of the ferromagnetic resonance frequency of the magnetic material 102 is input, so that the angle of the precession in the magnetic material 102 is maximized and also a magnitude of the induced electromotive force is maximized. As a result, the signal filtering is caused, and thus only the signal of the particular frequency decided by the ferromagnetic resonance frequency can propagate to the signal output port OUT.